



# MAKE IT CUSTOMIZED

## MAKE IT WITH LECTRA

How upholstered furniture manufacturers can meet demand for modular, customized furniture.

**Lacy,**  
Vice President, Design



**MAKE  
IT WITH  
LECTRA**

# Today's consumers don't just want a new piece of furniture.

They want limited edition designer collections and customized pieces that reflect their individuality. To stand out from the competition and remain competitive, upholstered furniture manufacturers need to offer more, and different services, including made-to-measure pieces and fast delivery. But, how do you meet the challenges of customization and limited editions, while still producing your regular pieces profitably and maintaining business momentum?

As the demand for personalized furniture increases, so too does the manufacturing complexity. Consumers don't just want to choose their materials, they want to mix and match modular designs; select features, such as headrests or cup holders; and even include motion functions and technology in their furniture. These additions take time to develop and can create significant challenges for production.

More complexity means more opportunities for error. You need to test more designs and create increasing numbers of prototypes, which can increase time-to-market, put pressure on resources, increase your costs and, ultimately, threaten your margins. What you need is a solution that gives you the freedom and flexibility to meet demand. Your processes should be at the heart of that solution.

In this lite paper, we'll discuss how you can optimize and automate your processes to help you meet the key challenges of manufacturing customized and increasingly complex upholstered furniture. We have more than 30 years' experience in the furniture industry, which, combined with innovative technologies and tailored services, means you are able to get the most out of your processes, people, and technology, so you can meet the needs of today's consumers, prepare for the future, and remain competitive.

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## FAST FACT

Automated cutting can save up to 5% on leather costs

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## Be creative

We know that consumers don't just want off-the-shelf products anymore: they want to get creative and personalize their goods to reflect their lifestyle. As such, choice, customization, and designer collections are no longer seen as 'luxuries' – they're becoming the norm. Consumers want to choose everything from size and configuration, right down to the smallest detail, such as topstitching – and if you want their business, you have to make that possible.

To satisfy consumer desire, you need to unleash your creativity. You can't put limits on design – give your people the freedom, time and tools to imagine new collections and explore new product features. But, how can you align that with your production constraints, business objectives and your bottom line? Can you practice 'infinite creativity' while still controlling your costs?

You can if you have the right tools and processes in place from the design phase onwards. That's where we can help.

With Lectra's 3D solution, you can accurately simulate new designs and explore multiple options, reducing the need for expensive, time-consuming physical prototypes. Design to cost by making modifications instantly, and automatically flatten them in 2D to see the impact on the cost of your model. Speed-up the whole product development and pre-production process to respond quickly to the very latest market trends and consumer demands – long before your competitors can.

## Master efficiency

The flip side of creativity is efficiency. Simple designs and mass production make it easier to operate efficiently, saving you time, money and wasted materials. But what about customized models, small production runs or one-off designer collections? How do you balance complexity with lead times and profitability? By creating agile processes and eliminating errors.

Every change that you make to a model – swapping the fabric or leather, or adding a recliner – impacts your product development and manufacturing processes. For example, you might want to test how a cover behaves under tension and then adjust the pattern to compensate. Or make changes to frames or fillings if you're creating openings to embed technology. Whatever the change, it will require time, resources, agility and know-how to achieve it. You'll also need accurate visibility of how that change will impact the quality and cost of your model. Traditionally, that means producing physical prototypes – but there are more efficient, cost-effective alternatives.

Using Lectra's product development and industrialization solution, you can simulate how cover materials will behave under tension and modify the patterns to improve the fit. So, you don't need to test each one on a separate physical prototype. You can also automatically generate technical data sheets containing wood and foam structures, and cutting and sewing plans.

With Lectra's 3D to 2D automation, changes made to 3D designs are automatically fed through to the 2D versions during the pre-production phase. Your design, product development and pre-production departments are able to work closely together, in a collaborative mode, to ensure design feasibility, anticipate and remove the risks for error, before they become a more costly problem. That's not all we can help you with.

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### FAST FACT

As many as 30% of all physical prototypes are never commercialized

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## Keep up with demand

The influence of technology on consumers' lives is also reflected in furniture. Manufacturers are creating 'smart living' models that incorporate technologies such as wireless phone chargers, docking stations and micro-speakers. There are even armchairs with integrated 'tablet tables'.

Rather than being the latest passing fad, furniture like this is set to be the future – and manufacturers need to be prepared for that.

You need to allow for technology in your designs. That means adapting everything from patterns and prototypes, to frames and inner materials, once again creating more complexity for you to manage. Even your supply chain will change, as you start working with new suppliers, in new markets.

With Lectra's expertise, adapting your processes to meet the needs of today's consumers doesn't have to be complex – you can simulate, manage and customize furniture efficiently and effectively to be sure that the finished product accurately reflects the designer's intention, at the defined cost and quality level.

Import and use technical data (including 3D data from third part suppliers) from your database to speed-up product development including reusing and standardizing parts. Enable designers and production teams to work collaboratively, sharing virtual prototypes to create "smart" furniture. In turn, you protect your margins and get to market quickly.

## Be agile and flexible

In production, time is of the essence. An optimized cutting room, whether for single or multi ply cutting (or both) uses streamlined processes, optimized work orders, removes bottlenecks at the cutting stage, and eliminates errors to ensure an uninterrupted workflow downstream. This also applies to short runs, limited editions and one-off models which do not follow the rules of normal production.

What's more, the increasing popularity of customers' own materials means that you may be dealing with limited fabric or leather quantities, with no room for error, either in material estimation or in cutting. This can pose a particular challenge as the material properties are completely unknown.

When dealing with patterned fabrics, accurate matching is key. Done correctly, pattern matching ensures a high quality finished product, and enhances your company image. So the more customized your product, the greater the need for straightforward, high-quality, accurate cutting.

At the same time, just like your regular production, repeatability and consistent cutting quality are important.

Designing agile and flexible processes, able to handle all types of production, the key is the simpler the better.

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### FAST FACT

Mixing variants in a single marker can reduce fabric consumption by up to 1.5%

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“We were looking for software that could help accelerate our development cycle time, provide clean geometry, create up-to-date technical files and standardize our process across developers. Lectra provided a complete package to help us accomplish all of these goals.”

**Glenn Kahn, Vice President of  
Manufacturing, Klaussner, USA**

## Embrace change

New processes, such as customization and embedded technologies are all big changes that have to be successfully implemented, and we know that people are often wary of change. That's why we used our expertise to develop a dedicated change management project offer to support you in achieving your medium and long-term strategic objectives.

We have 30 years' experience in implementing new processes in the upholstered furniture industry and managing the change that comes with them. That's because we're trusted partners who take a holistic view of your entire business, so we can work together to optimize your resources, people, processes and technology. We'll help you make the right choices for you, so you can achieve the best return on investment and the lowest total cost of ownership. And, seamless integration ensures that your existing technology investments form part of your continuous improvement strategy.

With this approach, you can get your whole business up-to-speed quickly, so you can start experiencing the benefits of your solutions as soon as possible. With leaner, more agile processes in place, you can deliver more customized designs, with more modularity and embedded technology. You can keep up with consumer demands, stay ahead of the competition and control your margins. Crucially, you can offer consumers a choice of services they cannot find elsewhere, and so grow your business.

Whether your challenge is to create complex customized designs, designer collections or furniture with embedded technology, we'll make sure you have the means to overcome it. We'll help you drive creativity, while maintaining efficiency. So you can remain competitive, profitable and manufacture responsibly – no matter what.



“It used to take two weeks or more. Now we can get from designer’s sketch to a physical prototype in around one week. DC3D, our CAD software, is a powerful tool. CAD usually models the outside of solid shapes but ours can go from the inside out or the outside in. It follows the contours and flattens them into 2D patterns for fabric that will be the right 3D shape when filled. What’s more, if we - or our customers - want to tweak the prototype, we can change a pre-programmed parameter to adjust the size or shape. The rest of the design updates itself by the wonders of associative technology and ta-dah! We have all the patterns we need to get the sofa into production.”

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**James Truswell, Development  
Manager, QFC, UK**

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## **GET IN TOUCH**

To discuss any of the issues covered in this lite paper in more detail, contact us at:

<http://makeitwith.lectra.com/en#contact>

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